

DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:** Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-010901**Date Inspected:** 19-Sep-2009**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1900**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:****CWI Present:****Yes No****Inspected CWI report:** **Yes No N/A****Rod Oven in Use:** **Yes No N/A****Electrode to specification:** **Yes No N/A****Weld Procedures Followed:** **Yes No N/A****Qualified Welders:** **Yes No N/A****Verified Joint Fit-up:** **Yes No N/A****Approved Drawings:** **Yes No N/A****Approved WPS:** **Yes No N/A****Delayed / Cancelled:** **Yes No N/A****Bridge No:** 34-0006**Component:** Deck Panel**Summary of Items Observed:**

Bridge No. 34-0006 Component: Deck Panels

Summary of Items Observed: On this day Caltrans OSM Quality Assurance (QA) Inspector Gary Richmond was present during the times noted above for observations relative to the fabrication of the SAS Superstructure being performed by Zhen Hua Port Machinery Company (ZPMC) at Chang Xing Island in Shanghai, China. QA Inspector observed the following:

The QA inspector performed conventional Ultrasonic (UT) Inspection on Deck Panel tack weld areas. The inspection is preliminary prior to using the Phased Array (PAUT) testing system to verify indications found with conventional Ultrasonic testing. The QA inspector performed UT on Deck Panel D3009-001, 5 ribs, 10 welds, 70 total tack welds inspected.

Weld 1 scanned 7 locations with 0 indications.

Weld 2 scanned 7 locations with 0 indications.

Weld 3 scanned 7 locations with 0 indications.

Weld 4 scanned 7 locations with 0 indications.

Weld 5 scanned 7 locations with 0 indications.

Weld 6 scanned 7 locations with 0 indications.

Weld 7 scanned 7 locations with 0 indications.

Weld 8 scanned 7 locations with 1 indication.

Weld 9 scanned 7 locations with 0 indications.

Weld 10 scanned 7 locations with 0 indications.

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The QA inspector performed conventional Ultrasonic (UT) Inspection on Deck Panel tack weld areas. The inspection is preliminary prior to using the Phased Array (PAUT) testing system to verify indications found with conventional Ultrasonic testing. The QA inspector performed UT on Deck Panel D3068-001, 5 ribs, 10 welds, 200 total tack welds inspected.

Weld 1 scanned 20 locations with 0 indications.

Weld 2 scanned 20 locations with 0 indications.

Weld 3 scanned 20 locations with 2 indications.

Weld 4 scanned 20 locations with 2 indications.

Weld 5 scanned 20 locations with 1 indication.

Weld 6 scanned 20 locations with 0 indications.

Weld 7 scanned 20 locations with 2 indications.

Weld 8 scanned 20 locations with 0 indications.

Weld 9 scanned 20 locations with 0 indications.

Weld 10 scanned 20 locations with 0 indications.

QA Inspector performed initial Phased Array Ultrasonic Testing (PAUT) following the guide lines of UT procedure titled "Phased Array Ultrasonic Testing for the Detection and Sizing of Suspected Planar Discontinuities (Cracks) in PJP Welds, # UT 04-0120F4 PJP Rib Weld" after conventional UT was performed on tack welded areas of the Partial Joint Penetration (PJP) welds joining U-Ribs to Deck Plate. The Deck Panels examined are as follows:

DP3009-001: 69 tack weld locations found compliant and 1 tack weld locations found non-compliant.

DP3068-001: 193 tack weld locations found compliant and 7 tack weld locations found non-compliant.

Tack weld locations found non-compliant are marked on U-Rib and Deck Plate for ZPMC's reference for repair. See Caltrans U-Rib to Deck Panel- Tack Weld Assessment sheets dated 19th of September, 2009 for further information on PAUT inspections.

On this date QA Inspector Gary Richmond was given ZPMC NDT Inspection Notification Sheet, Document No. 004145. This QA Inspector performed required Ultrasonic Testing (UT) of approximately 10% of the area previously tested and accepted by ZPMC Quality control personnel, on the following items listed for the OBG sub-assemblies in trial assembly yard.

DP3067-001 192,193, 214, 215, 224, 225, 245 and 246.

Unless otherwise noted, all work observed on this date appeared to be in general compliance with the applicable contract documents.

Summary of Conversations:

No relevant conversations to note.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or

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remedial efforts please contact Eric Tsang, who represents the Office of Structural Materials for your project.

Inspected By: Richmond, Gary

Quality Assurance Inspector

Reviewed By: Carreon, Albert

QA Reviewer